Econ 101 – Section 5

Lecture 4
Supply

January 22, 2004

Supply

- Law of Supply
- The Supply Schedule and the Supply Curve
- Changes in Quantity Supplied
- Changes in Supply
Supply

A firm’s production technology is the set of methods it can use to turn inputs (resources and raw materials) into outputs (goods or services).

Supply

When a competitive firm comes to a market as a seller, it wants to make the highest possible profit. Firms can choose the level of output they want to produce, but face three constraints:

- Their production technology
- The prices they must pay for their inputs
- The market price of their output
<table>
<thead>
<tr>
<th>Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>A firm’s <em>quantity supplied</em> of any good is the amount it would choose to produce and sell at a particular price.</td>
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</tbody>
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<tr>
<th>Firm’s Quantity Supplied</th>
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<td>A firm’s <em>quantity supplied</em> of any good is the amount it would choose to produce and sell at a particular price.</td>
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</table>
Market Quantity Supplied

Total amount of a good or service that all producers in a market would choose to produce and sell at a given price

Law of Supply

As the price of a good increases, the quantity supplied increases
The Supply Schedule and the Supply Curve

Supply schedule: a list showing the quantities of a good or service that firms would choose to produce and sell at different prices, with all other variable held constant.

Supply curve: a graphical depiction of a supply schedule.

<table>
<thead>
<tr>
<th>Price (per Bottle)</th>
<th>Quantity Demanded (Bottles per Month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1.00</td>
<td>2,500</td>
</tr>
<tr>
<td>2.00</td>
<td>4,500</td>
</tr>
<tr>
<td>3.00</td>
<td>5,000</td>
</tr>
<tr>
<td>4.00</td>
<td>6,000</td>
</tr>
<tr>
<td>5.00</td>
<td>6,500</td>
</tr>
</tbody>
</table>
Changes in Quantity Supplied and Supply

*Change in quantity supplied:* movement along a supply curve in response to a change in price

*Change in supply:* shift of a supply curve in response to some variable *other than price*

A decrease in labor costs causes the supply curve for maple syrup to shift from \( S_1 \) to \( S_2 \). At each price, more bottles are supplied after the shift.

<table>
<thead>
<tr>
<th>Price (per Bottle)</th>
<th>Original Quantity Demanded (Bottles per Month)</th>
<th>New Quantity Demanded After Increases in Income (Bottles per Month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1.00</td>
<td>7,500</td>
<td>9,500</td>
</tr>
<tr>
<td>2.00</td>
<td>5,000</td>
<td>8,000</td>
</tr>
<tr>
<td>3.00</td>
<td>5,000</td>
<td>7,000</td>
</tr>
<tr>
<td>4.00</td>
<td>4,000</td>
<td>6,000</td>
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<tr>
<td>5.00</td>
<td>3,500</td>
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</tr>
</tbody>
</table>
### Prices of Inputs

- A rise in price of an input causes a decrease in supply that shifts the supply curve to the *left*
- A fall in price of an input causes an increase in supply that shifts the supply curve to the *right*

### Profitability of Alternate Goods

*Alternate goods:* other goods a firm could produce using some of the same kinds of inputs as the original good

*When an alternate good becomes more profitable to produce because*

- its price rises
- the cost of producing it falls
- the supply curve for the original good will shift leftward
Profitability of Alternate Goods

When an alternate good becomes more profitable to produce because

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• the cost of producing it falls

the supply curve for the original good will shift leftward

Technology

Cost-saving technological advances increase the supply of a good, shifting the supply curve to the right
Productive Capacity

- An increase in productive capacity shifts the supply curve rightward.
- A decrease in productive capacity shifts the supply curve leftward.

Expectation of Future Prices

A rise in the expected price of a good will decrease the supply, shifting the supply curve leftward.

- Decrease current supply to take advantage of higher prices later.
Movements along the supply curve and shifts in supply

<table>
<thead>
<tr>
<th>Price</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>$P_1$</td>
<td>$Q_1$</td>
</tr>
<tr>
<td>$P_2$</td>
<td>$Q_2$</td>
</tr>
</tbody>
</table>

**Entire supply curve shifts leftward when:**
- price of input ↑
- profitability of alternate good ↑
- productive capacity ↓
- expected price ↑
- technology improves

**Entire supply curve shifts rightward when:**
- price of input ↓
- profitability of alternate good ↓
- productive capacity ↑
- expected price ↓
- technology improves

Price increase moves us rightward along supply curve.
Price decrease moves us leftward along supply curve.